REMARKS

Reconsideration of this Application is respectfully requested. Claims 1, 4, 8, 9, 12, 20 and 25 are amended. Claims 1-26 are in this case.

First, the Examiner objected to the drawings as failing to comply with 37 C.F.R. 1.84(p)(4) citing that reference character "13" has been used to designate a "soft roll coating", page 5, line 19; a "coating", on page 5, line 31; and a "roll coating", on page 6, line 1. The Examiner suggested that Applicants amend the Specification on page 5, line 31 and page 6, line 1 to delineate "soft roll coating".

Applicants respectfully state that the Specification has been amended, accordingly. Withdrawal of the Examiner's objection is, therefore, respectfully requested.

Next, the Examiner rejected claims 1-26 under 35 U.S.C. § 112, second paragraph, for indefiniteness. Specifically, according to the Examiner, in claim 1 and 9, the phrase "an additional weight" lacks sufficient antecedent basis, arguing that it implies that there is/are other weight(s), and those have not been previously recited. Regarding claims 4 and 12, the Examiner states that the phrase "has been made as desired" renders the claim vague and confusing, on the grounds that frequencies are not made, but obtained. The Examiner suggested that the phrase be changed to language such as "when the tuning frequency desired has been obtained..." The Examiner commented, in this connection, that this is a suggestion rather than a "requirement". As for claims 8, 20 and 25, the Examiner indicated that the phrase "or equivalent" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed, thereby rendering the scope of the claim(s) unascertainable.

In response, Applicants have amended claims 1, 4, 8, 9, 12, 20 and 25 to better define the invention without limiting effect. In particular, claims 1 and 9 have been amended to indicate the use of – – a selected weight – – rather than "an additional weight". Regarding claims 4 and 12, the language – – when the desired tuning frequency of the dynamic damper has been obtained – – has been added in place of "when the tuning frequency of the dynamic damper has been made as desired". As for claims 8, 20 and 25, reference to "or equivalent" has been deleted; in claims 8 and 25, "electric resistors" was also deleted to better define the invention without limiting effect.

Accordingly, Applicants respectfully request that the Examiner's rejections under § 112, second paragraph, be withdrawn.

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Finally, the Examiner rejected claims 1-26 under 35 U.S.C. § 102(b) as being anticipated by Arnhold et al. or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Arnhold et al. According to the Examiner, with respect to claims 1, 3 and 9, Arnhold et al. teach a method and device to damp the vibrations on a paper-making machine. Specifically, the Examiner continues, Arnhold et al. teach that the dampening is done by the use of a system which detects the natural frequency of the vibrating system, and dampens the vibration by moving a mass, weight. (See Abstract and col. 1, line 60 - col. 2, line 14 and col. 2, line 57 - col. 3, line 4. The Examiner states that Arnhold et al. also teach that the device can be used to dampen the vibration on different parts of a papermaking machine, such as breastboxes, frames and the mounting of rotating mass, rollers, etc. (See col. 4, lines 14-27 and, more specifically, col. 3, line 58 - col. 4, line 3). The Examiner determined that it seems the invention of Arnhold et al.

teaches all of the limitations of the claims, or at least the minor modifications, to obtain the system would have been obvious to one of ordinary skill in the art.

Regarding claims 2 and 10, the Examiner states that Arnhold et al. teach a control unit which can contain a device to analyze the frequencies of vibration of the structure, can separate the vibrating natural forms and can determine the kinematic quantities of the additional mass relative to the corresponding natural forms. (See col. 2, line 57 - col. 3, line 4). Concerning claims 4, 5, 12 and 17, even though Arnhold et al. is silent with respect to locking mechanisms of the additional mass/weight, the Examiner argued, this is either inherent to their invention or at least would have been obvious to one of ordinary skill in the art, since the mass/weight must be retained in the selected position so that the vibrations of the vibrating equipment do not move the mass/weight within the system and doing so changing the desired frequency of the dampening system.

As for claims 6-8, 11, 13-16 and 18-26, Arnold et al. purportedly suggests, in the Abstract, that the force effect of the servo motor can be caused by a pressure medium by piezo crystals or by magnetostrictive elements, i.e., the spring of the dynamic damper can be made of the different disclosed elements. (See col. 3, lines 35-57). The Examiner noted further that while the specifics of how the elements act, the manner in which the disclosed elements function is very well known in the art and equivalent to the ones claimed. Finally, the Examiner commented that Arnhold et al. show in the figures a mass which moves along a horizontal rod (See Figure 1), a hydraulic piston (See Figure 3), and a piezo crystal and/or an electromagnet (See Figure 4).

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With respect to the Examiner's rejections under § 102(b) and § 103(a), Applicants respectfully disagree, both with the Examiner's reading and application of Arnhold et al. In particular, Arnhold et al. relates generally to a method for damping vibrations on a paper-making machine using an actively operating damping apparatus. Such an apparatus, by definition, actively produces vibrations, the frequency of which is equal to but the amplitude opposite of those vibrations of the vibrating system intended to be dampened. An objective is to shut down the peaks of the resonant frequency. To accomplish this, Arnhold et al. produce vibration in the opposite phase and magnitude, using a movable selected mass controllable by a servo motor.

Contrary to Arnhold et al., Applicants' invention is of a passively operating type. The apparatus itself does not produce any vibration, but rather only receives vibrations passively. The range of frequencies to which Applicants' apparatus operates depends on its natural frequency. The desired natural frequency may be tuned by changing the spring constant of the damper spring, the mass of the damper, or both. The frequency to which the apparatus is tuned equals a multiple of the rotational frequency of the roll closest to the natural frequency of the vibrating system or equal to the problematic excitation frequency of the vibrating system.

Overall, Arnhold et al. does not absorb vibrations but rather produces a vibration the amplitude of which is opposite to that of the vibrating system. Accordingly, Arnhold et al. does not and cannot anticipate Applicants' invention. Nor is it suggestive of any operative features thereof.

Withdrawal of the Examiner's rejections under §§ 102(b) and 103(a) is, therefore, respectfully requested.

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Applicants have made a good faith attempt to place this Application in condition for allowance. Favorable action is requested. If there is any further point requiring attention prior to allowance, the Examiner is asked to contact Applicants' counsel by telephone at (212) 768-3800.

Respectfully submitted,

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Dated: November 26, 2001

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Marked-up copy of paragraph bridging Page 5 and Page 6 of the Specification

When a seam or some other equivalent thicker part travels through the nip N in the size press shown in Fig. 1, the soft roll coating 13 is deformed and it functions as a spring, with the result that the apparatus, in particular the roll 1 pivotally mounted on the frame 14, begins to vibrate. Vibration deforms the soft roll coating 13 further, whereupon the vibration is intensified and the roll 1 is brought to a resonating state. In conventional arrangements, this has led to the fact that it has been necessary to change the running speed because it has not been possible to dampen the vibration otherwise. In the invention, however, the damping of vibration has been taken care of such that a dynamic damper that is automatically tuned in accordance with the invention is mounted on the bearing housing 2 of the vibrating roll 1, which damper is illustrated in more detail in Fig. 2 of the drawing.